IBM Tealeaf cxVerify
Version 9 Release 0.1
December 4, 2014

cxVerify Administration Manual

Note
Before using this information and the product it supports, read the information in "Notices" on page 35.

This edition applies to version 9, release 0, modification 1 of IBM Tealeaf cxVerify and to all subsequent releases and modifications until otherwise indicated in new editions.

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cxVerify Administration Manual

The IBM Tealeaf cxVerify Administration Manual describes how to configure and administer the IBM Tealeaf cxVerify component. IBM Tealeaf cxVerify is used to forward outdated Tealeaf® data to long-term document storage for archiving. Use the links below to access specific topics in the manual.

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Chapter 1. IBM Tealeaf cxVerify Overview

Through IBM Tealeaf cxVerify, you can maintain an accurate record of each visitor's interactions with your website. As a visitor uses your web application, each click and page view is tracked by the IBM Tealeaf system. When the visitor's session is complete, IBM Tealeaf cxVerify stores the session in a persistent datastore from which you can later retrieve and replay it.

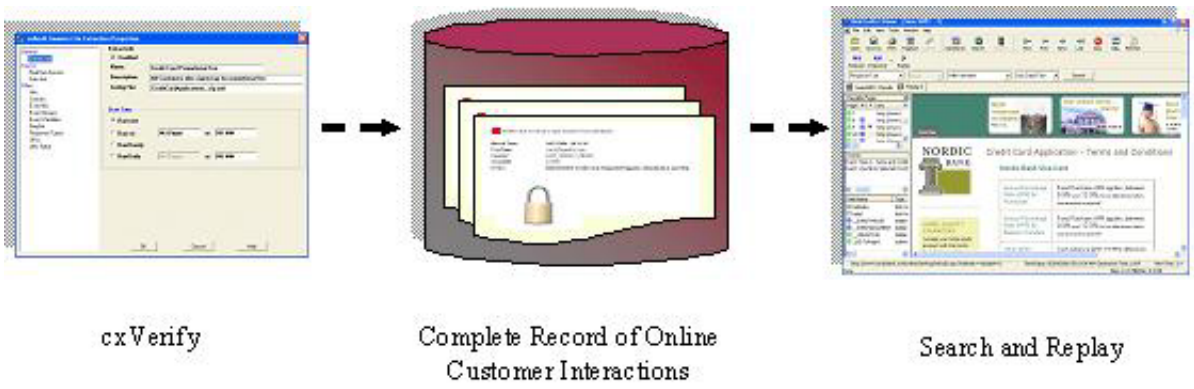

Figure 1. How IBM Tealeaf cxVerify works

IBM Tealeaf cxVerify is a valuable assistant in resolving customer disputes and retaining a comprehensive record of customer interaction for compliance purposes.

Note: IBM Tealeaf cxVerify is a separately licensable component of the IBM Tealeaf CX platform. IBM Tealeaf cxVerify is no longer available as a newly licensed product as of Release 8.7. Customers that licensed IBM Tealeaf cxVerify in Release 8.6 and earlier can continue to use and receive support for the product in Release 8.7 and later. For more information, contact Tealeaf Customer Support .

IBM TealeafcxVerify Tasks

With IBM Tealeaf cxVerify, you can define tasks to extract session data for use in external systems. You can set these tasks to run hourly, daily, or on a custom schedule.

You can monitor, stop, and re-execute tasks through the IBM Tealeaf Portal. You can also manage the graceful expiration of archived data.

IBM Tealeaf cxVerify Benefits

Accurate, Authentic, and Complete Records of Customer Interactions

IBM Tealeaf cxVerify provides an auditable representation of the actual online customer experience. These sessions are stored in a secure, tamper-free file format and can be digitally signed to prevent repudiation.

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Easily Searched, Retrieved, and Reviewed

Every extracted session that includes the pages, navigational paths, and user selections is saved as an Adobe Acrobat PDF file. The PDF file includes critical information, such as the customer ID, date and time, and specific events.

Session files can be stored or archived within your existing file and document management systems.

Replay with IBM Tealeaf CX RealiTea Viewer (RTV)

To review an archived session, a user selects a IBM Tealeaf cxVerify session file and starts a replay of the user experience in IBM Tealeaf CX RealiTea Viewer.

Note: To replay sessions archived by IBM Tealeaf cxVerify, you must install RTV on your desktop system. For more information, see the *IBM Tealeaf RealiTea Viewer User Manual*.

How IBM Tealeaf cxVerify Works

IBM Tealeaf cxVerify is a Windows service that runs on a IBM Tealeaf CX server. Typically, it runs on a separate server from the primary IBM Tealeaf CX server, but it can be installed on the primary server if needed.

Note: You can run only one IBM Tealeaf cxVerify server at any time.

IBM Tealeaf cxVerify consists of the following components:

- User interface
- Service that schedules and extracts selected customer session data
- Viewer that enables business users to replay and review customer sessions

IBM Tealeaf cxVerify uses an Extraction API to extract the archived session data. In a single-machine environment, data is extracted from the Long-Term Canister.

- The batch-load extraction service can run as a scheduled process or when needed.

The IBM Tealeaf cxVerify system runs the following tasks:

1. Queries the IBM Tealeaf CX Server to return a list of matching sessions.
2. Queries the IBM Tealeaf CX Server to return the XML session document for each matching session.
3. Parses the returned XML and extracts name-value data such as **URL** field name and **URL** field value.
4. Packages the customer session data into a replayable file format.
5. Wraps the replayable session file into a PDF file, with selected metadata.
6. Writes the PDF file with the embedded session to a pre-defined directory, where it can be archived or managed by your existing systems.

Handling Exceptions

If the data extraction process receives a socket exception while it is communicating with the IBM Tealeaf Processing Server, it pings the IBM Tealeaf CX Server. It then takes one of the following actions:

- If the server is not reachable for a configurable period, IBM Tealeaf cxVerify stops processing for that server and logs an error. If there is more than one IBM Tealeaf CX Server, it attempts to connect to the next server.
- If the IBM Tealeaf CX Server is reachable, it tries to contact the IBM Tealeaf Search Server service. If the IBM Tealeaf Search Server service is not responding for a configurable period, it stops processing for that server and logs an error. If there are multiple IBM Tealeaf CX Servers, the extractor process attempts to connect to the next server.

Chapter 2. IBM Tealeaf cxVerify Installation

This chapter contains preparation information and the required steps to install IBM Tealeaf cxVerify on an existing IBM Tealeaf CX system.

For more information on downloading IBM Tealeaf, see IBM® Passport Advantage® Online.

IBM Tealeaf cxVerify Server Requirements

The IBM Tealeaf cxVerify server must meet the following minimum requirements:

- Dual 1.8-GHz Pentium processors
- 2-GB RAM
- Disk space that is based on the amount of data that is being extracted and your retention policies

Extraction performance characteristics vary based on the following criteria:

- Extraction constraints criteria (for example, export only sessions that have greater than one hit)
- Extraction filters (for example, do not export cookie values)
- Network connectivity
- Session size

Note on installing with SQL Server

When IBM Tealeaf cxVerify and Microsoft SQL Server are on the same server, they can compete for resources.

Note: In general, do not install IBM Tealeaf cxVerify on a server where other resource-intensive applications are installed. IBM Tealeaf cxVerify can be co-located with IBM Tealeaf cxConnect for Data Analysis.

The solution is to raise the setting that controls the desktop heap for each desktop that is associated with a non-interactive window. For more information, see `http://support.microsoft.com/kb/824422`.

Adobe Acrobat Reader

Any user who views session files must install Adobe Acrobat Reader, which is available for free through http://www.adobe.com.

Any user who views session files must install the IBM Tealeaf CX RealiTea Viewer. This separate software product is included with your IBM Tealeaf cxVerify license.

cxVerify Installation Steps

1. Install IBM Tealeaf cxVerify

Run the IBM Tealeaf cxVerify installer, `setup.exe`, on the target server. During the installation, you select the IBM Tealeaf cxVerify components to add:

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- `cxVerify Service` - extract session data from IBM Tealeaf Canister and export to a variable archive or PDF

The installer:

- Adds the IBM Tealeaf cxVerify menu item to the IBM Tealeaf menu
- Adds the IBM Tealeaf Extractor Service to Windows services

Note: Scheduled extract tasks do not run until the IBM Tealeaf you start the Extractor service in the Windows Services panel in the Microsoft Management Console.

2. Configure Permissions

Note: If you install this product as part of a new installation of IBM Tealeaf, access to product features through the Portal are provided to the `ADMIN` group automatically. Automatic access is also granted if you license this product for an existing IBM Tealeaf solution and do not modify your `ADMIN` group permissions.

- If you modify the `ADMIN` group and are deploying this product to an existing IBM Tealeaf solution, you must update menu permissions manually for that group.
- For all other users and groups, you must configure the appropriate permissions.
- See "CX User Administration" in the *IBM Tealeaf cxImpact Administration Manual*.

3. Install IBM Tealeaf CX RealiTea Viewer

Note: To use IBM Tealeaf cxVerify to export sessions as PDF files that include images, you must install IBM Tealeaf CX RealiTea Viewer on the IBM Tealeaf cxVerify server. For more information, see the *IBM Tealeaf RealiTea Viewer User Manual*.

4. Restart IBM Tealeaf Management Server

If you are installing IBM Tealeaf cxVerify on a pre-existing server, such as the IBM Tealeaf Portal Server, then you must restart the IBM Tealeaf Management Server.

- For more information, see the *IBM Tealeaf cxImpact Administration Manual*.

5. Create the IBM Tealeaf cxVerify Server

To enable communications between the IBM Tealeaf Portal and IBM Tealeaf cxVerify, create an instance of the IBM Tealeaf cxVerify Server in the Portal Management page.

- For more information, see the *IBM Tealeaf cxImpact Administration Manual*.

6. Run Test Extract

Before you configure large extract jobs that involve a high number of sessions, configure a test extract of no more than three sessions.

1. Configure a search that returns only three sessions. Copy the search string from the Session List page.

   For more information, see the *IBM Tealeaf cxImpact User Manual*.
2. Configure a IBM Tealeaf cxVerify task that uses this search string to retrieve the sessions. The search string can be pasted into the configuration.
3. Run the task and verify the results.

7. Install Complete

When you complete the test extraction, you can use IBM Tealeaf cxVerify.

Configuring Events for IBM Tealeaf cxVerify

For events and their data to be made available for IBM Tealeaf cxVerify export, the **Searchable and Reportable** check box must be selected in the event definition in the Event Manager. This setting must be selected for each event that you want to export through IBM Tealeaf cxVerify.

For more information, see the *IBM Tealeaf Event Manager Manual*.

Directory for Session File Extraction

You must select a destination directory for the extracted session PDF files. This directory can be local or remote.

Document management systems, such as IBM FileNet®, can scan this directory to retrieve new session files.

Upgrading IBM Tealeaf cxVerify

After you upgrade IBM Tealeaf cxVerify to Release 8, you must add back your cxVerify Server reference to the Portal Management page. After you complete the software installation, add the server reference through the Portal.

This known issue might be fixed in a later build. For more information, see *Managing Tealeaf Servers*.

Upgrading from Release 7.x or later

If you are upgrading IBM Tealeaf cxVerify from Release 7.x or later, run the IBM Tealeaf CX Upgrader provided with the software installation on the server that hosts IBM Tealeaf cxVerify.

- For more information, see the *IBM Tealeaf CX Upgrade Manual*.

Upgrading from Release 6.x or earlier

If you are upgrading IBM Tealeaf cxVerify from Release 6.x or earlier, more steps are required.

1. Before you upgrade, you must acquire your IBM Tealeaf cxVerify job definitions file from your current installation.

   This file is in the following location:

   `<Tealeaf_install_directory>\DataExtractor\JobListCfg.xml`
2. Save this file into a location outside of the IBM Tealeaf installation directory.
3. Uninstall all IBM Tealeaf cxVerify software.
   a. Log in to the server where IBM Tealeaf cxVerify is installed.
   b. From the Windows **Start** menu, open the Control Panel.
   c. Select **Add/Remove Programs**.
   d. Uninstall IBM Tealeaf cxVerify from the Add/Remove Programs control panel.
4. If you are upgrading IBM Tealeaf cxImpact at the same time, upgrade IBM Tealeaf cxImpact.

For more information, see the *IBM Tealeaf CX Upgrade Manual*.

5. Verify that IBM Tealeaf cxImpact is properly functioning.
6. Reinstall IBM Tealeaf cxVerify from the software distribution from which you upgraded IBM Tealeaf cxImpact.

   For more information, see "cxVerify Installation Steps" on page 5.
7. Verify that IBM Tealeaf cxVerify is accessible from the IBM Tealeaf Portal.
8. Re-create your IBM Tealeaf cxVerify jobs.

   Use the job specifications in `JobListCfg.xml` as your source content.

   Note: Do not overwrite `JobsListCfg.xml` into the new installation. The format changed in this release, and the file does not work.

   For more information, see Chapter 3, "IBM Tealeaf cxVerify Configuration Tasks," on page 13.
9. Verify that your IBM Tealeaf cxVerify jobs are working properly in the upgraded Portal.

Initial IBM Tealeaf cxVerify Configuration

Note: Following is a framework for configuring one component of the IBM Tealeaf CX system in a simplified deployment model. Depending on your deployment, more configuration might be required. If you have any questions about configuration, contact http://support.tealeaf.com.

IBM Tealeaf cxVerify generates an accurate record of each visitor's interactions with your website. At scheduled intervals, IBM Tealeaf cxVerify stores captured session data in a persistent datastore from which you can later retrieve and replay it.

Note: IBM Tealeaf cxVerify is a separately licensable component of the IBM Tealeaf CX system. IBM Tealeaf cxVerify is no longer available as a newly licensed product as of Release 8.7. Customers that licensed IBM Tealeaf cxVerify in Release 8.6 and earlier can continue to use and receive support for the product in Release 8.7 and later. For more information, contact Tealeaf Customer Support .

Pre-Requisites

Before you begin, install all IBM Tealeaf software on Windows or Linux servers. For more information, see the *IBM Tealeaf CX Installation Manual*.

In addition, you must first complete the initial configuration steps for IBM Tealeaf cxImpact. For more information, see the *IBM Tealeaf CX Configuration Manual*.

IBM Tealeaf cxVerify Installation

Before you begin, you must install IBM Tealeaf cxVerify.

Types of Archiving

IBM Tealeaf cxVerify supports one type of archiving.

Session File Task: To export session data to a PDF, configure a Session File Task to deliver the session data files to a IBM Tealeaf cxVerify server. For each exported session, a PDF file is generated and can optionally include logging information and a link to replay the session. See "Session File Tasks" on page 9.

Servers

Add a IBM Tealeaf cxVerify Server

The IBM Tealeaf Portal requires a reference to communicate with the IBM Tealeaf cxVerify server. You must create this reference through the Portal Management Page.

Session File Tasks

If you are delivering individual PDF files for each extracted session, complete the following configuration steps to set up a Session File task.

Adding an cxVerify IBM Tealeaf Server

Session File Export requires a IBM Tealeaf cxVerify Server to manage extraction and data output.

1. Log in to the IBM Tealeaf Portal as an administrator.
2. From the **Portal** menu, select **Tealeaf** > **Portal Management**.

   The Portal Management page opens.
3. In the left navigation pane, click **Tealeaf Servers**.
4. Click the **Manage Servers** link. The list of currently available servers is displayed.

   The list of currently available servers is displayed.
5. If an IBM Tealeaf cxVerify server does not exist, click **New** and select **IBM Tealeaf cxVerify Server** from the menu.
   - If a IBM Tealeaf cxVerify server exists, select it and click **Edit**.
6. Edit the IBM Tealeaf cxVerify Server properties.
   a. Click the **Active** check box.
   b. Enter the **Display Name** for the server.

      The default value is `cxVerify Server`.
   c. From the list, select the server that is hosting the IBM Tealeaf cxVerify Server.
   d. Enter the port number to use.

      The default value is `19000`.
   e. Click **Save**.

The server is added to the list.

Editing the General Tab

1. Click the **General** tab.
2. Enter a value for the task Name. For example, `test_task`.
3. For Scheduling, click *Run Now*.
4. For the Extract parameters, enter a time period when you know that session data was generated.
   - For testing purposes, limit yourself to a one-hour period. Do not overlap dates for this test.
   - To specify a date, click in one of the date fields and use the calendar tool to select a date.
   - To specify a time value, click in one of the time fields. Use the arrow keys or enter the value from the keyboard. To set the time value, click **Set**.
   - Verify that your **`Extract From`** and **`Extract To`** values define a one-hour period that occurred when session data was likely captured.

5. Select the **Active** check box.

Editing the IBM Tealeaf CX Servers Tab

1. Click the **IBM Tealeaf CX Servers** tab.
2. Click the check box next to the server from which you want to extract sessions.
   - If multiple servers are listed, select only a single server.

Editing the Data Set Tab

For this test, skip the **Data Set** tab.

Editing the Destination Tab

1. Click the **Destination** tab.
2. Click the **Session Files** link.
   - You can select the **Session Files with Images** option. However, output in this format might take considerably longer.
   a. Select the **Active** check box.
   b. Specify the directory on the IBM Tealeaf cxVerify Server where output PDF files are to be written.

      Ensure that you have access to that directory.

Digital Signature Tab

For this test, skip the Data Signature tab.

PDF Page Fields Tab

For this test, skip the PDF Page Fields tab. The default values are ok.

Notification Tab

1. Click the Notification tab.
2. Click the To button.
3. Enter your email address in the space provided.

Save Task

After you have completed the above steps in each IBM Tealeaf cxVerify tab, click **Save**. The task is saved.

Checking Task Status

Because the task was specified to run immediately, IBM Tealeaf cxVerify begins processing it as soon as possible. Complete the following steps to verify task status.

Note: Because you configured the task to send status to your email address, you can wait for the email to be delivered to you. However, if there is a configuration issue with the mail settings, use IBM Tealeaf cxVerify to monitor job status.

1. In the IBM Tealeaf cxVerify left navigation pane, click **Scheduled Tasks**.

   The job is displayed in the list of scheduled tasks. In the **Information** column, you can monitor the progress of the task completion.

   When the task is complete, the **Information** column field value concludes with **`Processed`**.
2. To refresh the display, click **Refresh**.

The notification email arrives shortly. It contains the extraction log for the task, which can be useful in resolving issues.

Test Your Configuration

After you complete your initial configuration, you can take the following steps to verify the configuration.

Through the sections below, you can check that IBM Tealeaf cxVerify outputted the sessions in the correct location.

A complete set of tests can be run after all IBM Tealeaf components are configured. For more information, see the *IBM Tealeaf CX Configuration Manual*.

Verifying Session File Task

1. Go to the output directory on the IBM Tealeaf cxVerify Server.

   The number of PDF files should match the number of sessions that are listed in the **Information** column of the Scheduled Tasks page as were processed for your task.
2. To verify output, open a sample of the PDF files.

When all IBM Tealeaf components are configured, complete an end-to-end test. For more information, see the *IBM Tealeaf CX Configuration Manual*.

Chapter 3. IBM Tealeaf cxVerify Configuration Tasks

Through the IBM Tealeaf Portal, you can configure tasks to be run according to schedule by IBM Tealeaf cxVerify.

- To open IBM Tealeaf cxVerify, select **Tealeaf** > **cxVerify** in the IBM Tealeaf Portal. To see the list of configured tasks, click **Configure Tasks** in the left pane.

  Note: Accessing IBM Tealeaf cxVerify requires administrator privileges in your IBM Tealeaf Portal account. If you cannot see the IBM Tealeaf menu in the Portal, you do not have administrator privileges.

  Note: IBM Tealeaf cxVerify is a separately licensable component of the IBM Tealeaf CX solution. IBM Tealeaf cxVerify is no longer available as a newly licensed product as of Release 8.7. Customers that licensed IBM Tealeaf cxVerify in Release 8.6 and earlier can continue to use and receive support for the product in Release 8.7 and later. For more information, contact Tealeaf Customer Support .

TLI tasks are now managed through the IBM Tealeaf Portal.

Configured Tasks Window

In the Configured Tasks window, you can review the set of currently configured tasks. For each task, you can review its start time and frequency (**Task Type** column), and whether it is enabled. The ID column contains the internal identifier for the task.

Identifiers are used by IBM Tealeaf cxVerify tasks, hidden internal tasks, and IBM Tealeaf cxConnect for Data Analysis tasks, if it is installed.

Note:

- Some internal tasks are not displayed, which can result in gaps in the ID sequence.
- With unique internal identifiers, you can have multiple tasks with the same name, but this practice is not recommended.

Through the Configured Tasks window, you can complete the following tasks:

- Edit - To edit an existing task, select the task and click the Pencil icon.
- New - To create a task, select the task and click **+**.

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Note: If you receive an error message, verify that the IBM Tealeaf cxVerify software is installed on the server that is specified for IBM Tealeaf cxVerify in the Portal Management page.

- Delete - To delete a task, select the task and click the **-**.

Configured Tasks Context Menu

You can right-click any configured task to show the following options in the **Context** menu:

- **Edit Task** - Edit the selected task. See "Types of IBM Tealeaf cxVerify Tasks."
- **Add Task** - Add a task. See "Types of IBM Tealeaf cxVerify Tasks."
- **Remove Task** - Delete the selected task.

Types of IBM Tealeaf cxVerify Tasks

IBM Tealeaf cxVerify supports the configuration and execution of the following types of tasks.

Task **Description**

Session File Task
Create an extract task to deliver sessions to PDF files. See "Session Files" on page 20.

Note: If you cannot create tasks, verify that the IBM Tealeaf cxVerify software is installed on the server that is specified in the Portal Management page.

PDF output

Delivering sessions to PDF output is useful for the following reasons.

- Replay fidelity is encapsulated in PDF files that contain all required reference files.
- You can email PDF files.
- PDF files can be digitally signed.
- You can use existing document management systems to manage PDF files.

However, PDF files require a separate document management system for pruning unwanted files and searching for wanted files with a different system. Overall disk requirements are also higher if static objects are repeated in every PDF.

Editing Tasks or Creating New Tasks

When you edit or create a task, you must provide the name, schedule, source, destination information, and any content filtering or notification options. You configure a task by providing information in each of the following tabs.

- To save a configured task, click **Save** in the upper-right corner. If the **Save** button is red, you must provide more information before you can save the task.
- To cancel changes to a configured task, click **Cancel**.

General tab

In the General tab, you configure the name and scheduling information for the task.

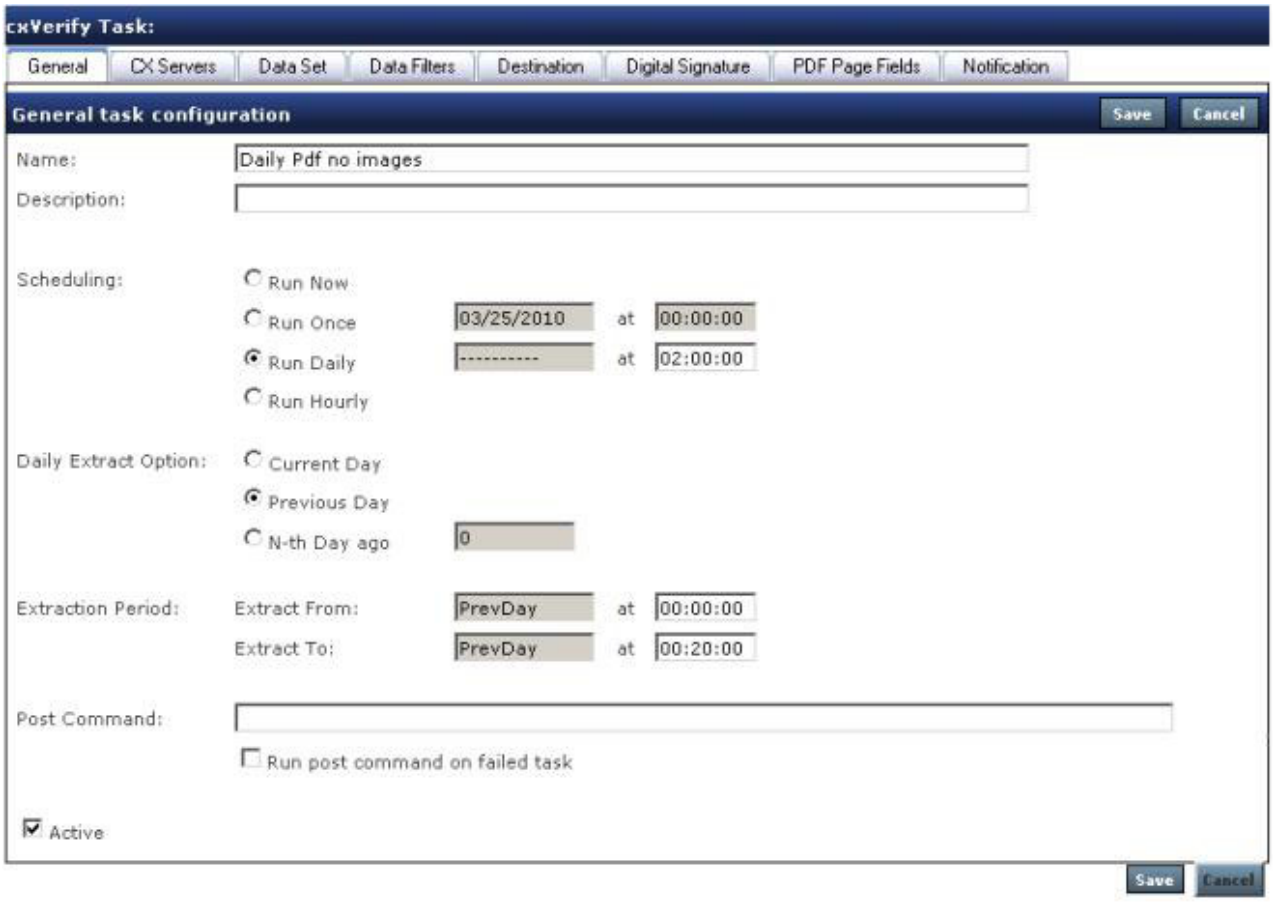

Figure 2. General tab

- **Name** - the name for the task, which is displayed in the Configured Tasks and Scheduled Tasks windows.

  Illegal characters are removed from the Name when the task is saved.
- **Description** - the description for the task.
- **Scheduling** - the schedule for when the task is to run: Now or Once, Hourly, or Daily at the scheduled time.

  Note: To account for the processes of indexing sessions and canister session timeout settings, it is recommended that any daily tasks be scheduled after 02:00:00 each night. See "Daily tasks fail to start when scheduled" on page 29.
- **Daily Extract Option** - If you schedule a Daily extract task, you can choose to extract from the current day, the previous day, or some day in the past, as specified by the number of days that are entered in the text box. Your selections auto-populate the Extraction Period settings. See "Configuring Daily Extractions" on page 16.
- **Extraction Period** - The time period from which to extract session data. These fields are constrained based on the **Scheduling** selection.

  Note: You can apply more filters to the data through the Data Filters tab.

  Some session data can be excluded as part of the data extract through the Data Set tab.

- **Enable Custom Extract Commands** - If you must apply custom commands to the data extractor on the host computer, select this option, and enter the command. While the extractor understands a small set of commands, this option is rarely used on recent installations.
- **Post Command** - To run a command after the task finishes successfully, enter a command in the Post Command text box. For example, if you are generating log files, you can move the log files to an archive location after they are created. You run this command at the command line of the host operating system for the extractor. To run this command even if the task fails, select the check box.

  The default directory for the command is `<Tealeaf_install_directory>\DataExtractor`.

  Note: Post commands run as separate tasks after the current task. These tasks can be tracked as scheduled tasks. For more information, see the *IBM Tealeaf cxConnect for Data Analysis for Administration Manual*.
- **Active** - Select the Active check box to enable the task to be run according to schedule.

Scheduling

Note: To account for the processes of indexing sessions and canister session timeout settings, it is recommended that any daily tasks be scheduled after 02:00:00 each night.

The following scheduling options can be applied to your configured task.

Scheduling Option
Description

`Run Now`
As soon as the task is configured, run it immediately.

`Run Once`
Run the task at the scheduled time and then do not run it again.

`Run Daily`
Run the task at the scheduled time each day.

`Run Hourly`
Run the task every hour of every day.

Depending on the type of extraction, IBM Tealeaf cxVerify waits the following time periods:

- For repeated tasks such as Daily or Hourly task, IBM Tealeaf cxVerify verifies that the session indexes were updated at least 1 hour after the end of the configured extract time.

  If an hourly job is unable to complete in the allotted number of tries, it is skipped and is not reattempted. The next hour, the job is run to collect that hour's data.
- For ad hoc tasks, IBM Tealeaf cxVerify does not attempt an extraction until 30 minutes after past the end of the extract time.
- Run Now tasks do not check the indexes.

Configuring Daily Extractions

You can configure daily extraction tasks to extract sessions from today, yesterday, or a specific day further in the past.

With daily extractions, you can select a daily slice of sessions for archiving purposes, which can significantly reduce the cost of storage.

1. Select the **Run Daily** Scheduling option.
2. Select the **Daily Extract** option:

   Daily Extract Option
   Description

   Current Day
   Extracts sessions from today's date.

   Note: To acquire the full day's sessions, schedule the extraction task for just before midnight.

   Previous Day
   Extracts sessions from yesterday's date.

   N-th Day ago
   Extracts sessions N days before the current date, whenever the task is run. Specify a value in the text box for N between 1 and the maximum age of sessions in the queried canisters.
3. Review the Extraction period to verify that you are extracting from the appropriate date.
4. Specify the remaining configuration options for the task in the other tabs.
5. Click **Save**.

IBM Tealeaf CX Servers tab

In the IBM Tealeaf CX Servers tab, you can specify the IBM Tealeaf CX Servers from which to extract data. The list of available servers identifies all servers that are managing Long-Term Canisters in the environment.

Note: You can select only IBM Tealeaf CX servers that are currently active.

Note: Do not configure tasks to extract sessions from Canisters from a different version of IBM Tealeaf cxVerify. For example, do not use Release 7.2 IBM Tealeaf cxVerify to retrieve sessions from a Release 7.1 Canister.

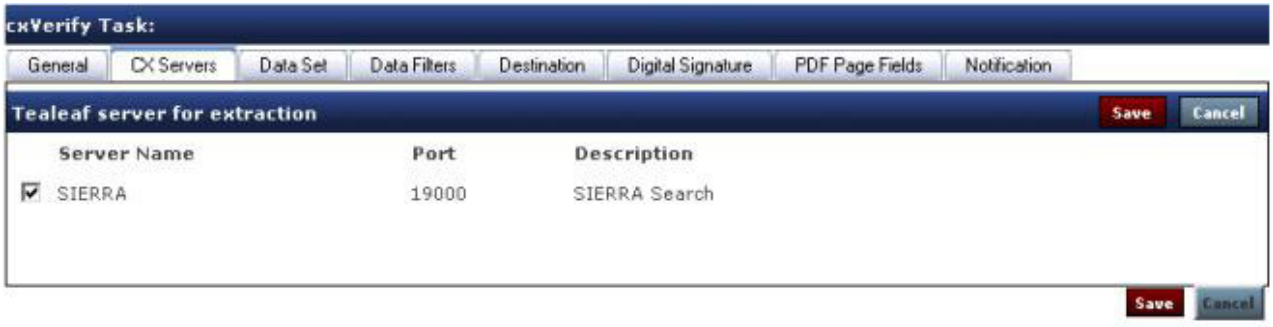

Figure 3. IBM Tealeaf CX Servers tab

- To extract data from a server, select the box next to the server's name.

Data Set tab

In the Data Set tab, you specify search criteria to apply to the available session data for the selected time period. Additionally, you can specify custom commands

to extract the data and to run after the task completes.

Figure 4. Data Set tab

- **Exclude Single Hit Sessions** - Select this option to exclude sessions that are composed of a single request and a single response. These sessions are often not interesting to users.
- **Enable Custom Extract String** - In the Portal or the IBM Tealeaf CX RealiTea Viewer, you can search for specific sessions. For example, you can search for specific values in fields in the session data.

  You can copy search criteria from RTV or the Portal and paste them into this field. For more information about the syntax, see the *IBM Tealeaf RealiTea Viewer User Manual*.
- **Custom Search String appears on same page** - When enabled, matches of the custom search string and matches of the other search parameters for the task must appear on the same page to be displayed in the results. Searches configured with this option are limited to retrieving and extracting a maximum of 16,384 sessions.

Data Filters tab

Through the **Data Filters** tab, you can specify whether to include or exclude sessions that are based on specific types of data.

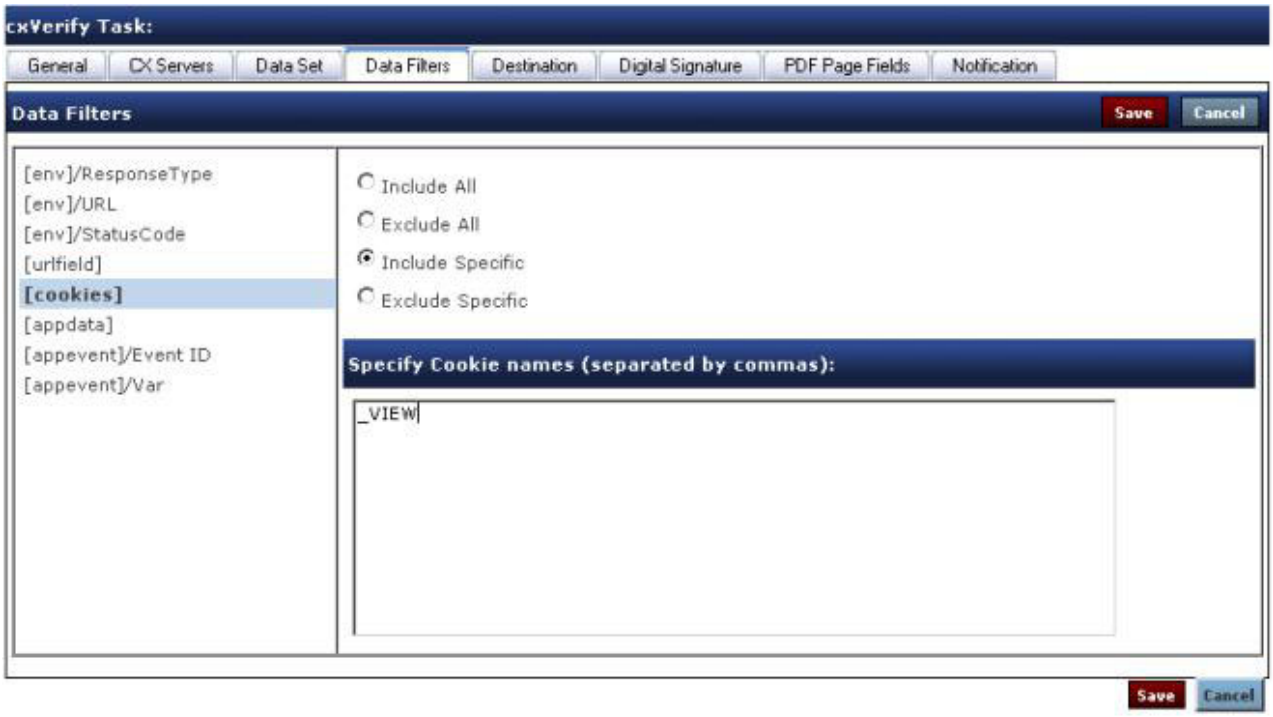

Figure 5. Data Filters tab

You select from the following types of session filters:

- **Rsp Types** - Sessions that are filtered by Response type value. For example, you can include all sessions with RspType of `text/html`.
- **URLs** - Sessions can be filtered by URL.
- **StatusCode** - Sessions can be filtered by the status code that is returned by the server.
- **URL Fields** - Sessions can be filtered by URL field name.
- **Cookies** - Sessions can be filtered by the cookie name.
- **App Data** - Session can be filtered by `[appdata]` field name.
- **Hits** - Sessions can be filtered by HTTP status code.
- **Event IDs** - Sessions can be filtered by the Event ID.
- **Vars** - Sessions can be filtered by event variable name.

Select one of the following options:

- **Include All** - Include all sessions that are specified by the data filter.
- **Exclude All** - Exclude all sessions that are specified by the data filter.
- **Include Specific** - Include specific sessions that match the comma-separated criteria that you specify in the text box.
- **Exclude Specific** - Exclude specific sessions that match the comma-separated criteria that you specify in the text box.

Data Filters Example

To exclude all sessions with cookie name `_VIEW`:

1. Select the **Cookies** data filter.
2. Select **Exclude Specific**.
3. Enter `_VIEW`.

As each session is processed for extraction, all sessions that contain cookies with the name `_VIEW` are skipped and are not sent to the destination.

Destination tab

In the **Destination** tab, you can specify the destination of the archive, depending on the type of archive you are creating.

Note: For any task, only one destination type can be active at any time.

Destinations

- "Session Files"
- "Session Files with Images"

Session Files

To export session data, click **Session Files**. Session data is exported in .TLS format and then attached to a PDF file for easy, cross-platform access.

Figure 6. Destination tab for Session Files

- **Active** - If this destination is the active one for this task, check **Active**.
- **PDF Directory** - The directory for PDF files
- **Merge Sessions** - Select this option to assemble multiple session fragments into a single session.
- **Temp Directory** - Specify the directory where the .TLS file is written before it is attached to the PDF.

Session Files with Images

When you export session files with images, all image-related data is exported with the session data to create self-contained image files for use on any user's system through IBM Tealeaf CX RealiTea Viewer . To export session data and related images, click **Session Files with Images**.

Note: To export session files in PDF format with images, the IBM Tealeaf CX RealiTea Viewer stand-alone application must be installed on the IBM Tealeaf cxVerify server. For more information, see the *IBM Tealeaf RealiTea Viewer User Manual*.

Note: When image data is included in the export, the export process takes longer.

Note: Session files with images are generated by the IBM Tealeaf CX RealiTea Viewer. IBM Tealeaf cxVerify must run the CX RealiTea Viewer application with the Extractor Service as an NT user with authorization to retrieve sessions. CX RealiTea Viewermust be installed on the IBM Tealeaf cxVerify server.

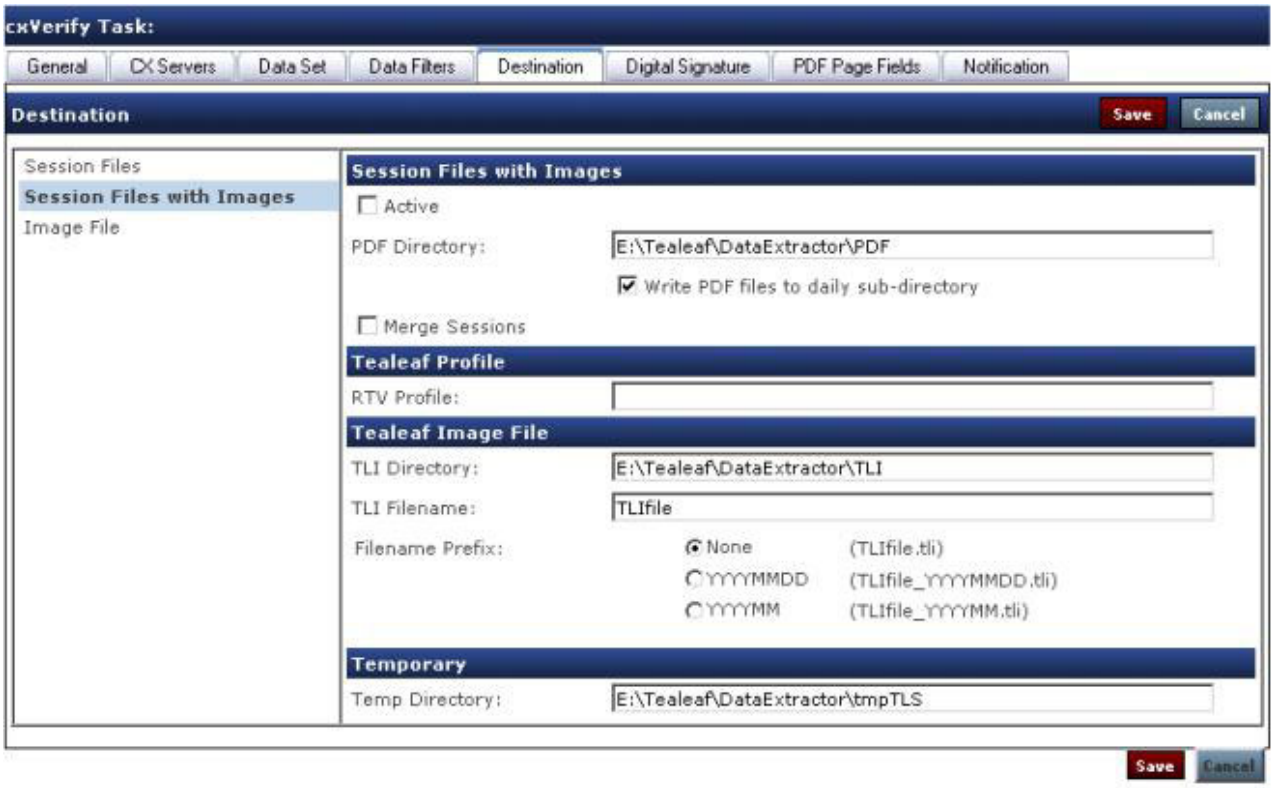

Figure 7. Destination tab for Session Files with Images

- **Active** - If this destination is the active one for this task, check **Active**.
- **PDF Directory** - The directory for PDF files
- **Merge Sessions** - Select this option to assemble multiple session fragments into a single session.
- **RTV Profile** - Enter the name of theCX RealiTea Viewer profile that contains the user settings to apply to the export. Through a profile, you can configure specific user settings to apply to the outputted file. For example, some environments do not provide access to the enterprise customer-facing website. Instead, you are be required to specify an internal server for access through the profile settings.
- **TLI Directory** - This directory specifies a local cache of images, Java™ files, and other environmental data. By referencing a local cache, the export process does not need to retrieve these items from the server for each exported session.
- **TLI Filename** - Enter the root file name of the TLI file that is in the TLI directory. You do not need to specify the file extension.
- **Filename** - Select the date stamp append string that is used in the IBM Tealeaf image file name.
- **Temp Directory** - Specify the directory where the .TLS file is written before it is attached to the PDF.
- **Portal Authentication** - If the Portal manages authentication of user accounts through its own mechanisms, you must supply IBM Tealeaf cxVerify with a user name and password with which it can access the Portal to retrieve sessions.

Note: Changes to the user account information in this area must be consistent with the user account information in IBM Tealeaf cxImpact. For more information, see the *IBM Tealeaf cxImpact Administration Manual*.

Portal authentication is enabled through Search Server. See "Configuring the Search Server" in the *IBM Tealeaf CX Configuration Manual*.

Digital Signature tab

If needed, you can apply a digital signature to the exported PDF, which ensures that the file cannot be altered without detection.

- The Digital Signatures tab does not apply to Selective Archives.
- Optionally, you can use the PCA to generate your own self-signed certificate. For more information, see the *IBM Tealeaf Passive Capture Application Manual*.

Figure 8. Digital Signature tab

- **Enabled** - Select to include the specified digital signature in the PDF file.
- **Certificate Path** - The location of the digital certificate.
- **Certificate Password** - The password to access the digital certificate.

PDF Page Fields tab

In this tab, you specify the data fields that are written into the metadata of the PDF file.

- To include all fields, click **Set All**.
- To include a field, select the check box next to its name.
- To clear all fields, click **Clear All**.
- For more information about the available fields, see Chapter 5, “cxVerify metadata fields,” on page 27.

Notification tab

In the Notification tab, you enter email addresses to receive notification when the task runs, whether the task is successful.

Figure 9. Notification tab

To specify a set of addresses, click **To**, **CC**, or **BCC** and enter a comma-separated list of email addresses to receive updates on the task status.

Chapter 4. Scheduling Tasks

Through the Portal, you monitor your scheduled IBM Tealeaf cxVerify tasks.

- To open IBM Tealeaf cxVerify, select **Tealeaf** > **IBM Tealeaf cxVerify** in the Portal. To see the scheduled tasks, click **Scheduled Tasks** in the left pane.

  Note: Accessing IBM Tealeaf cxVerify requires administrator privileges. If you cannot see the **Tealeaf** menu in the Portal, you do not have administrator privileges.

  Note: IBM Tealeaf cxVerify is a separately licensable component of the IBM Tealeaf CX solution. IBM Tealeaf cxVerify is no longer available as a newly licensed product as of Release 8.7. Customers that licensed IBM Tealeaf cxVerify in Release 8.6 and earlier can continue to use and receive support for the product in Release 8.7 and later. For more information, contact Tealeaf Customer Support .

Scheduled Tasks Window

In the Scheduled Tasks window, you can review the tasks that are scheduled to run, initiated, or completed.

- **ID** - contains the internal identifier for the task. Identifiers are used by IBM Tealeaf cxVerify tasks, hidden internal tasks, and IBM Tealeaf cxConnect for Data Analysis tasks, if it is installed.
- **Name** - the name for the task
- **Status** - the status of the task. To refresh the status of all tasks in the window, click **Refresh**.
  - **Waiting to Run** - the task is scheduled to run
  - **Completed** - the scheduled task completed successfully. To run a task again, select the task and click **Run Again**.
  - **Failed** - the scheduled task failed to complete. To find out why, select the task and click **View Log**.
  - **Stopped** - the scheduled task was stopped by a user.
  - **Running** - the scheduled task is running. To stop any task, select it and click **Stop Task**.
- **Start Time** - the date and time for the next time the task is scheduled to run. Time is based on a 24-hour clock.
  - Timestamps for when the task actually started are labeled with an asterisk (*).
- **Information** - a short message that indicates the results of the task. For more information, see the log for the task.

To take any of the following actions on a listed task, right-click it and select from the following options:

- **View Log** - View the log messages that are generated by the task.
- **Run Task Again** - Run the task again immediately.
- **Stop Task** - Stop a task from running now or at its scheduled time in the future.
- **Disable Task** - Clears the Enable flag for the task and removes it from the schedule.

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Context Menu

When you right-click on a task in the task list, the following menu items are available:

- **View Log** - View the log associated with the task.
- **Extended Log** - View the extended log for the task.
- **Run Task Again** - Run the task immediately. A copy of the task is created and run. Subsequent runs occur according to the schedule.
- **Stop Task** - Stop a running task.
- **Disable Task** - Disable the task from future runs.

  Note: Disable task applies only to scheduled tasks or waiting to be scheduled.

Task Execution

At the scheduled time, IBM Tealeaf cxVerify runs the specified task. To run the task, IBM Tealeaf cxVerify requires that basic IBM Tealeaf CX services, such as Search Server are available. Additionally, the IBM Tealeaf Extractor Service must be operational.

Typically, tasks fail when there are network interruptions, or the Extractor Service is unable to connect to a canister. When a task fails, IBM Tealeaf cxVerify tries to complete the task a predefined number of times.

- Errors are reported in the Extractor log and the IBM Tealeaf cxVerify Tasks log.
- This number of repeat attempts can be configured through the Extractor Service configuration in TMS. For more information, see the *IBM Tealeaf cxImpact Administration Manual*.

If the number of failures reaches the limit, then the task is resumed at the next scheduled time.

Note: When a rescheduled task is resumed, the extraction resumes where it left off. For example, if the extraction was midway through the second of three canisters, the sessions in the first canister and the first half of the second canister are not re-extracted.

Chapter 5. cxVerify metadata fields

In the PDF files that are generated by IBM Tealeaf cxVerify, the following fields may be included as metadata.

- For more information about configuring the fields to include, see Chapter 3, "IBM Tealeaf cxVerify Configuration Tasks," on page 13.

Field descriptions

Table 1. Field Descriptions

Field Name	Description	PDF Note #
SessionDateTime	Session DateTime stamp	1
ExtractDateTime	Extract DateTime stamp	2
LoginID	User Login ID • This value is taken from Session Attribute 00.	3
RemoteAddr	Client IP address	4
Url	Session URL titles	5
UrlFields	IBM TealeafURL fields	6
AppData	IBM Tealeaf Application Data	7
Cookies	Cookies	8
EventID	Event ID	9
EventTitle	Event Title	10
EventTextFound	Event Text Found or fact value	11
EventValueID	Event Value ID	12
EventValueDescription	Event Value Description	13
SessionMerges	Number of Session Merges	14
CanisterName	Canister Name	19
SessionID	Canister ID	20
TLTSID	IBM Tealeaf Session ID	21
TLTUID	IBM Tealeaf User ID	22
HitCount	Number of Hits	23
ExtractSearchString	Extract Search String	24
SesnAttr	"Session attributes"	

Session attributes

Session attributes fields 05-63 are also included in the output as the `SesnAttr` values.

Legacy support for event definitions

The following table describes how pre-Release 8.0 event definitions are mapped into Release 8.0 IBM Tealeaf cxVerify data fields.

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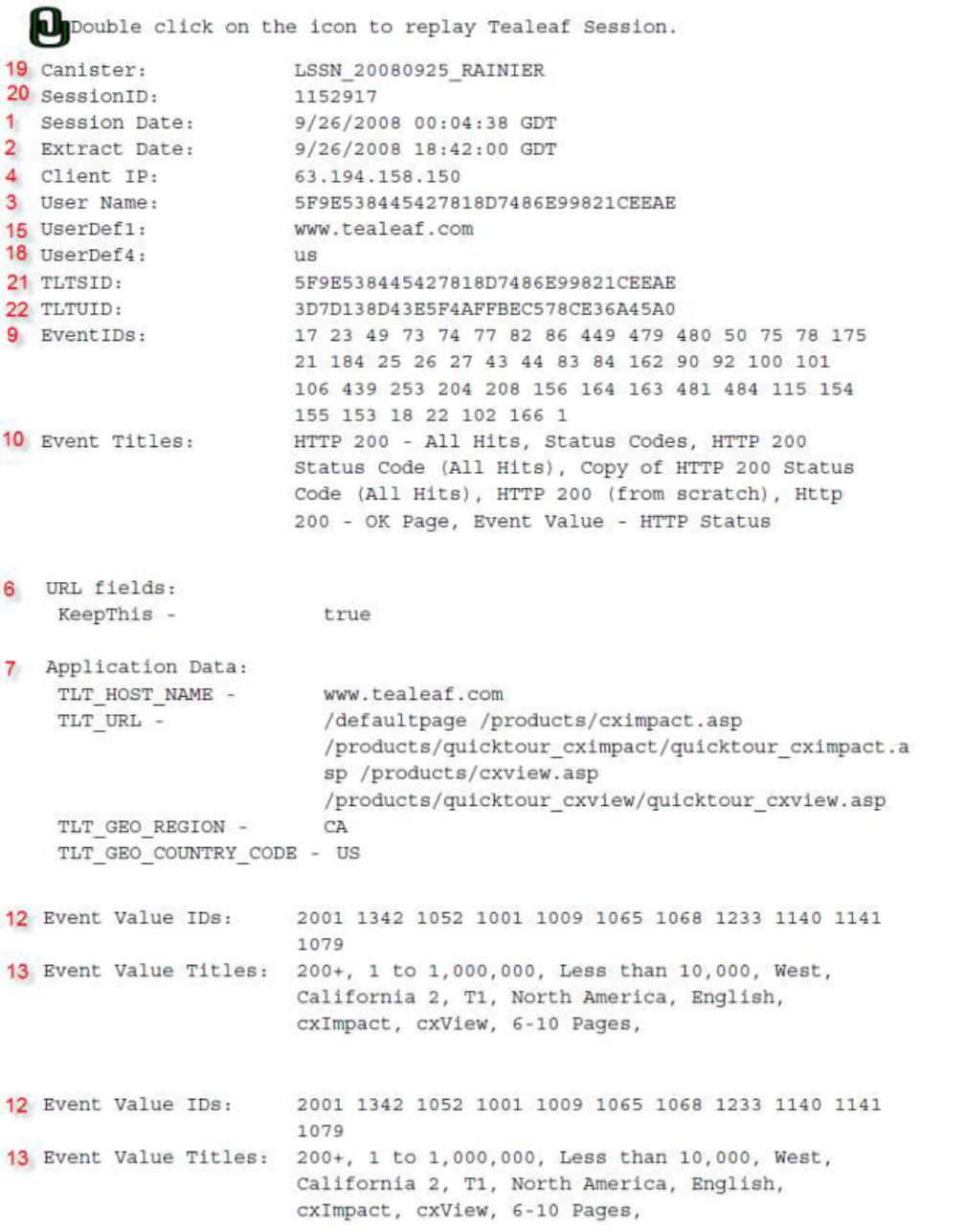
- The `No Dimension Report Group` report group, which is associated with all events, can be exported through IBM Tealeaf cxVerify.

Table 2. Legacy Support for Event Definitions

Item	Release 8.0 or later field	pre-Release 8.0 field
Event Name	`Eventname`	`event_name`
Event ID	`Event ID`	`unique_id`
Category ID	empty	`category_id`
Session Event	`N`	`session_event`
Dimension Group	`group_name`	N/A
Enum ID	empty	`enum_id`
Fact Dim Value 0	`Fact dimvalue0`	`text_found`
Fact Dim Value 1 - Fact Dim Value 3	not mapped currently	N/A
Login ID	`Session Attribute 00`	`Login ID`
Session attribute 1	`Session Attribute 01`	`UserDef 1`
Session attribute 2	`Session Attribute 02`	`UserDef 2`
Session attribute 3	`Session Attribute 03`	`UserDef 3`
Session attribute 4	`Session Attribute 04`	`UserDef 4`

Example outputs



```
Double click on the icon to replay Tealeaf Session.
19 Canister:            LSSN_20080925_RAINIER
20 SessionID:           1152917
1  Session Date:        9/26/2008 00:04:38 GDT
2  Extract Date:        9/26/2008 18:42:00 GDT
4  Client IP:           63.194.158.150
3  User Name:           5F9E538445427818D7486E99821CEEAE
15 UserDef1:            www.tealeaf.com
18 UserDef4:            us
21 TLTSID:              5F9E538445427818D7486E99821CEEAE
22 TLTUID:              3D7D138D43E5F4AFFBEC578CE36A45A0
9  EventIDs:            17 23 49 73 74 77 82 86 449 479 480 50 75 78 175
                        21 184 25 26 27 43 44 83 84 162 90 92 100 101
                        106 439 253 204 208 156 164 163 481 484 115 154
                        155 153 18 22 102 166 1
10 Event Titles:        HTTP 200 - All Hits, Status Codes, HTTP 200
                        Status Code (All Hits), Copy of HTTP 200 Status
                        Code (All Hits), HTTP 200 (from scratch), Http
                        200 - OK Page, Event Value - HTTP Status

6  URL fields:
    KeepThis -            true

7  Application Data:
    TLT_HOST_NAME -       www.tealeaf.com
    TLT_URL -             /defaultpage /products/cximpact.asp
                          /products/quicktour_cximpact/quicktour_cximpact.a
                          sp /products/cxview.asp
                          /products/quicktour_cxview/quicktour_cxview.asp
    TLT_GEO_REGION -      CA
    TLT_GEO_COUNTRY_CODE - US

12 Event Value IDs:     2001 1342 1052 1001 1009 1065 1068 1233 1140 1141
                        1079
13 Event Value Titles:  200+, 1 to 1,000,000, Less than 10,000, West,
                        California 2, T1, North America, English,
                        cxImpact, cxView, 6-10 Pages,

12 Event Value IDs:     2001 1342 1052 1001 1009 1065 1068 1233 1140 1141
                        1079
13 Event Value Titles:  200+, 1 to 1,000,000, Less than 10,000, West,
                        California 2, T1, North America, English,
                        cxImpact, cxView, 6-10 Pages,
```

Daily tasks fail to start when scheduled

IBM Tealeaf cxVerify delays the start of a daily task until all sessions to be extracted were indexed into the Long Term Canister. IBM Tealeaf cxVerify inserts an extra time margin to ensure that any idle sessions in the canister expired.

Any IBM Tealeaf cxVerify daily task has an end time of 24:00, and the task cannot begin until one hour after the last session was indexed. This one-hour buffer ensures that all sessions marked as "closed" had time to be indexed. For a daily task that extracts yesterday's data (00:00 - 24:00 of the date before today), the earliest start time is 1:00 am.

In addition to the one-hour buffer, sessions do not close until the canister session idle time expired. If the session idle time is set for 30 minutes, the earliest executable start time is 1:30 am.

Suppose that the Nightly Extract is scheduled to run at 00:01 each morning. At 00:01 the Nightly Extract attempts to run and checks the session indexes.

- The last indexed session time was 23:49:50 from the previous day, so the one hour buffer test that failed and the task is scheduled to run again at 01:01.
- At 00:55, the Nightly Extract attempts to schedule a run at 01:01 and checks the session indexes. Since the last indexed session time was 23:59:43 from the previous day, the one-hour buffer test failed at the time of the test, and the task was scheduled to run again at 02:01.
- At 01:55 the Nightly Extract attempts to schedule a run at 02:01 and checks the session indexes. The index test passes, and the task is scheduled and started at 02:01:01.

Note: To account for the processes of indexing sessions and canister session timeout settings, it is recommended that any daily tasks be scheduled after 02:00:00 each night.

cxVerify job failing due to RTV revocation information is not available certificate error message

When IBM Tealeaf cxVerify jobs are failing because RTV is unable to retrieve images, you may receive the following error message about the security certificate:

```
revocation information is not available
```

In this case, the issue is caused by RTV attempting to access images that are stored in a location that requires a security certificate. Since RTV uses an embedded version of Internet Explorer, you can circumvent this issue by making a configuration change in IE.

1. Close RTV, if it is open.
2. Open Internet Explorer.
3. In the **IE** menu, select **Tools** > **Internet Options**.
4. Click the **Advanced** tab.
5. Scroll to the Security heading.
6. Clear `Check for server certificate revocation`.
7. Click **OK**.
8. Close Internet Explorer.
9. Restart RTV.

After the above configuration change was performed, RTV should be able to capture the images, and the IBM Tealeaf cxVerify task should complete.

Search Server exception: invalid HTTP response status 401

When running IBM Tealeaf cxVerify data extractor jobs, you may see errors similar to the following:

```
9/29/2009 12:23:36 PM | Reading event definitions ...
9/29/2009 12:23:36 PM | Search server error (HQA:19000):
TeaLeaf.SearchServer.SearchServerException:
SearchServerCS.TalkToRealSearchServer(): Invalid HTTP response status 401
at TeaLeaf.SearchServer.RealSearchServer.RealCommunicate(String command,
```

```
ArrayList args, Int32 timeout)
at TeaLeaf.SearchServer.TLSearchServer.GetEventListMS(Boolean log, Int32
timeout)
9/29/2009 12:23:36 PM | Trying to get event list from search server
HQA:19000...
```

In the above case, IBM Tealeaf cxVerify is attempting to run the data extraction task as the local system administrator account. Under NT authentication, it is recommended that the DataExtractor use a local non-system account.

1. Review the logs to verify the NT user being used to connect. You should see an entry like the following:

   ```
   9/29/2009 12:23:35 PM | NtAuthorization server: HQA:19000, user:
   NT_AUTH\SYSTEM
   ```

2. The above indicates that a local system admin account user is in use: `NT_AUTH\SYSTEM`.
3. Change the account to use:
   a. On the server, open the Windows Services Control Panel.
   b. In the list of services, double-click `Tealeaf Extractor Service`.
   c. Click the **Log On** tab.
   d. Click **This Account**.
   e. Specify the account to use.
   f. Click **OK**.
4. In the Domain controller, verify that the above user is part of the Admin group for the domain, which ensures that the user has access to the other servers in the domain.
5. In the Tealeaf Portal, add the above account to the IBM Tealeaf cxImpact Admin group.
   a. In the **Portal** menu, select **Tealeaf** > **Portal Management**.
   b. In the Portal Management page, click the IBM Tealeaf CX User Administration heading.
   c. Click the **Groups** link.
   d. Select **Admin Group**.
   e. Click **Assign Users**.
   f. Select a check box next to the above user.
   g. Click **Save**.
6. Restart all Tealeaf Services.

Chapter 6. IBM Tealeaf documentation and help

IBM Tealeaf provides documentation and help for users, developers, and administrators.

Viewing product documentation

All IBM Tealeaf product documentation is available at the following website:

https://tealeaf.support.ibmcloud.com/

Use the information in the following table to view the product documentation for IBM Tealeaf:

Table 3. Getting help

To view...	**Do this...**
Product documentation	On the IBM Tealeaf portal, go to **?** > **Product Documentation**.
Help for a page on the IBM Tealeaf Portal	On the IBM Tealeaf portal, go to **?** > **Help for This Page**.
Help for IBM Tealeaf CX PCA	On the IBM Tealeaf CX PCA web interface, select **Guide** to access the *IBM Tealeaf CX PCA Manual*.

Available documents for IBM Tealeaf products

Use the following table to view a list of available documents for all IBM Tealeaf products:

Table 4. Available documentation for IBM Tealeaf products

IBM Tealeaf products	**Available documents**
IBM Tealeaf CX	• *IBM Tealeaf Customer Experience Overview Guide* • *IBM Tealeaf CX Client Framework Data Integration Guide* • *IBM Tealeaf CX Configuration Manual* • *IBM Tealeaf CX Cookie Injector Manual* • *IBM Tealeaf CX Databases Guide* • *IBM Tealeaf CX Event Manager Manual* • *IBM Tealeaf CX Glossary* • *IBM Tealeaf CX Installation Manual* • *IBM Tealeaf CX PCA Manual* • *IBM Tealeaf CX PCA Release Notes*

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Table 4. Available documentation for IBM Tealeaf products (continued)

IBM Tealeaf products	Available documents
IBM Tealeaf CX	• *IBM Tealeaf CX RealiTea Viewer Client Side Capture Manual* • *IBM Tealeaf CX RealiTea Viewer User Manual* • *IBM Tealeaf CX Release Notes* • *IBM Tealeaf CX Release Upgrade Manual* • *IBM Tealeaf CX Support Troubleshooting FAQ* • *IBM Tealeaf CX Troubleshooting Guide* • *IBM Tealeaf CX UI Capture j2 Guide* • *IBM Tealeaf CX UI Capture j2 Release Notes*
IBM Tealeaf cxImpact	• *IBM Tealeaf cxImpact Administration Manual* • *IBM Tealeaf cxImpact User Manual* • *IBM Tealeaf cxImpact Reporting Guide*
IBM Tealeaf cxConnect	• *IBM Tealeaf cxConnect for Data Analysis Administration Manual* • *IBM Tealeaf cxConnect for Voice of Customer Administration Manual* • *IBM Tealeaf cxConnect for Web Analytics Administration Manual*
IBM Tealeaf cxOverstat	*IBM Tealeaf cxOverstat User Manual*
IBM Tealeaf cxReveal	• *IBM Tealeaf cxReveal Administration Manual* • *IBM Tealeaf cxReveal API Guide* • *IBM Tealeaf cxReveal User Manual*
IBM Tealeaf cxVerify	*IBM Tealeaf cxVerify Administration Manual*
IBM Tealeaf cxView	*IBM Tealeaf cxView User Manual*
IBM Tealeaf CX Mobile	• *IBM Tealeaf CX Mobile Android Logging Framework Guide* • *IBM Tealeaf Android Logging Framework Release Notes* • *IBM Tealeaf CX Mobile Administration Manual* • *IBM Tealeaf CX Mobile User Manual* • *IBM Tealeaf CX Mobile iOS Logging Framework Guide* • *IBM Tealeaf iOS Logging Framework Release Notes*

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